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UNCLAS SECTION 01 OF 05 HANOI 002654

SIPDIS

USDA FOR USDA/FAS/OA/BSimmons
USDA FOR USDA/APHIS/BRS/JTurner

STATE FOR STATE/EB/DMalac
STATE FOR STATE/OES/HLee

PASS USAID FOR JLewis

PASS FDA FOR RLake

PASS EPA FOR JAndersen

E.O. 12958: N/A

TAGS: [EAGR](#) [ECON](#) [SENV](#) [TBIO](#) [TSPL](#)

SUBJECT: Vietnam -- BIOTECH REGs

REF:SECSTATE 263456

1. Summary: Vietnam does not have a biotech framework law, but one is being developed. Vietnam does have several biotech labeling laws. However, they have not been implemented. There have not been any problems with biotech commodity trade, but Post will have to monitor the development of the new biotech framework law and the labeling regulations. End Summary.

2. No Problem: Without any real biotech laws or guidelines, Vietnam imports biotech commodities (e.g., corn, soybeans, soybean meal, cotton) from various trading partners without any apparent concerns.

3. However: A recent (July 2003) Food Safety Ordinance, approved by the National Assembly's Standing Committee, notes:

(Article 8)... that it is strictly prohibited to produce or trade in genetically modified foods, which have not been approved by a competent State authority.

(Article 20) Genetically modified food or materials must be labeled, and the government shall stipulate in detail the management and use of genetically modified food.

4. No Guidelines: Despite the Food Safety Ordinance (and earlier laws), the Government of Vietnam has not yet decided which Vietnamese agencies will issue guidelines or standards for biotech foods. Post will continue to monitor developments.

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BACKGROUND
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5. Embassy Science Fellow: During August-September 2003, Post hosted Dr. Phil Schwab, from USDA/CSREES, as an Embassy Science Fellow to work with Vietnamese authorities drafting biotech legislation. The following information is based on his exit report.

6. The Vietnamese government has identified the development of biotechnology as a major priority and is dedicating significant funding to equip laboratories and train scientists for work in genotyping, genetic engineering and biosafety. The government is currently drafting legislation to regulate the import, field-testing and commercial release of genetically engineered organisms. Although the technology to create transgenic plants is rapidly being adopted, experience with genetically modified organisms and biosafety regulation is limited

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CURRENT BIOSAFETY POLICY STATUS
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7. Currently a legal framework for the regulation of agricultural biotechnology does not exist in Vietnam. The government is currently undertaking a multi-agency effort to draft an official policy. This effort has been underway for nearly five years. Currently the responsibility for drafting the biosafety framework is under the responsibility of the Ministry of Natural Resources and Environment (MONRE). Other ministries involved in the drafting process include Agriculture and Rural Development (MARD), Science and Technology, and Trade and these ministries are quite deferential to MONRE when discussing issues related to the biosafety regulation. MONRE reports that a final draft of the regulation is scheduled to be presented to the

government as a Prime Minister's Decree by the end of the year. MONRE is also responsible for activities in Vietnam related to the Cartagena Biosafety Protocol and the principles of the protocol appears to be driving the effort to develop the Vietnamese biosafety regulation. Vietnam expects to become a party to the protocol, perhaps in early 2004.

18. The current lack of a regulation has several implications. Many other Southeast Asian nations are parties to the Cartagena Biosafety Protocol and will soon implement the requirements for regulation of trade in living modified organisms. Scientists who are working on the development of transgenic plants are not able to officially conduct field tests. Scientists are not able to acquire transgenic crop varieties developed in other countries. Companies are not officially able to test, nor market transgenic crop varieties in Vietnam. Many people report that insect-resistant, transgenic cotton of Chinese origin is being grown under field trial or commercial production in Vietnam, although the size or scope of the effort cannot be confirmed.

19. Recent drafts of the Prime Minister's Decree contain provisions for notification of import, laboratory, field-testing and use of genetically modified organisms. In general, the most recent draft contains many of the common elements of existing agricultural biotechnology regulations and are much improved over earlier drafts and is based on principles of scientific risk assessment. However, some concerns still remain, including multiple layers of approval, the breadth of the role of provincial authorities, and regulation of the "products" of GMOs. It is not clear to what extent local authorities will have the ability to approve or deny the field-testing or production of transgenic crops. It is not clear to what level products derived from transgenic plants will be submitted to regulation. For instance the draft does not differentiate between products like oils refined from transgenic crops and clothing derived from transgenic cotton. A new draft is circulating among concerned agencies at the time of writing this report.

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BIOSAFETY ISSUES
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10. The overriding concern discussed regarding transgenic organisms in Vietnam is the implications for export markets. Vietnam is a major exporter of rice and, many people expressed concern over about the introduction of transgenic rice varieties due to the potential for export disruption. The fisheries sector is also concerned about the trade implications of products like soybean oil made from transgenic soybeans and the possible labeling requirements associated with its use in seafood processing. Several people discussed the possibility of a nation exporting a transgenic organism to Vietnam that is not approved in the country of origin that could cause subsequent problems for Vietnamese exports.

11. A secondary concern revolves around the impact of transgenic technology on the diversity of the agricultural landscape, both in terms of the crops and the number of varieties grown. Due to the dominant smallholder nature of Vietnamese agriculture, diversity is currently quite high although a small number of varieties of major crops like rice dominate the market and rice is by far and away the dominant crop planted in the most productive agricultural regions. The related concern of corporate control of transgenic seeds and related costs were also mentioned, especially by the press. Intellectual property is a current issue as the government attempts to implement Plant Variety Protection (PVP/UPOV) procedures. There is very little control of intellectual property in Vietnam and many scientists see this as a barrier to the development of new advanced crop varieties.

12. Most scientists in fields related to crop science voice few concerns over the safety of transgenic organisms and are eager to move forward with the development of the technology. The only major hesitation detected was in the already mentioned case of rice, however there was a general consensus among many scientists that a non-food crop species, such as cotton, should be the initial test case. Despite this concern several research institutes have transgenic versions of many food crops, including rice, and the Cuu Long Rice Research Institute has a substantial program to develop efficient rice transformation

systems.

13. Among food processing and technology researchers there was more concern about the long-term impact of consumption of transgenic food products. This may have something to do with where many of these individuals were trained (Europe, Japan, etc). This concern was echoed in questions received from press who are clearly aware of the objections to transgenic crop technology raised in Europe and other nations. At this time, however, there does not appear to be an active anti-biotech campaign or effort underway in Vietnam to attempt to sway public opinion away from adoption of biotechnology.

14. Complicating matters related to transgenic regulation is the lack of capacity for monitoring or testing for the presence of transgenic plants. Recent food safety legislation required that foods derived from genetically modified organisms must be labeled. However, experts from universities, government ministries and even private firms admit that there is no current capacity for effective enforcement of this requirement. Some universities and institutes, including the Pasteur Institute in Ho Chi Minh City are beginning to experiment with protocols to test for the presence of genetically modified organisms. Private food safety testing firms admit that there are more serious problems, such as microbial and chemical contamination that need to be addressed before much attention can be turned to the issue of genetically modified organisms.

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SCIENTIFIC CAPACITY IN AGRICULTURAL BIOTECHNOLOGY

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15. The development of biotechnology is one of the top priorities of the Vietnamese government, second only after information technology. In nearly any news report on science and technology, biotechnology is mentioned as a priority. In discussions over technology cooperation with other nations, biotechnology is also emphasized. At least from the level of vice-minister and on down in the Ministry of Agriculture and the Ministry of Science and Technology, the government is committed to moving ahead with new investment and activities in biotechnology. The development of the biosafety law is one example of this commitment.

16. Agriculture is one of the areas receiving substantial government investment in biotechnology, and this investment appears to be targeted to specific institutions. The definition of biotechnology depends on the institution. In general, biotechnology currently is limited to tissue culture, anther culture, RFLP and PCR-based genotyping of pathogens and germplasm, and some marker assisted selection. However, several institutions are forging ahead with the development of transgenic and advanced genomic technologies - including the Institute for Biotechnology (Hanoi), the Cuu Long Rice Research Institute (Can Tho), the Agricultural Genetics Institute (Hanoi) and the Institute of Tropical Biology in Ho Chi Minh City. Scientists are using both agrobacterium-mediated and "gene gun" technology to create transgenic plants. Transgenic plants of rice, cotton, banana, Paulownia, and papaya were observed growing under laboratory or greenhouse conditions. The Institute for Tropical Biology and the Institute for Biotechnology both have greenhouses dedicated for transgenic plants. The Cuu Long Rice Research Institute is currently constructing a dedicated greenhouse for transgenic plants. There are reports of transgenic, insect-resistant cotton plants being tested in Vietnam, but it is difficult to find a consistent report on the size or scope of the trial.

17. Biotechnology is viewed as a means to both increase the productivity and profitability of Vietnamese agriculture. Animal biotechnology is significantly behind plant technology and all transgenic work is currently being done in plants. A great deal of effort is being focused on the development in insect resistant (Bt) crop varieties - not only to control the many insect pests inherent in a tropical environment, but also in an effort to reduce reliance on expensive imported pesticides. Recently, however, the focus of agricultural research is moving from a focus on quantity of production to product quality. One example is the project at the Cuu Long Rice Research Institute to discover genes associated with aromatic traits in rice and other high-value quality characteristics. Golden Rice appears to be mainly a scientific curiosity rather

than a research priority - this may be to known limitations of the technology as well as the overall hesitancy to introduce transgenic rice varieties in general.

18. The main challenges facing the Vietnamese agricultural research system are the sheer number of agricultural research institutes, the extraordinarily broad, overlapping missions of the individual institutes, and the lack of coordination between institutes and universities. Commonly two or more institutes have programs addressing the same or similar issues in the same cropping environment. This appears to be a greater problem in the north where the many MARD research institutes often have similar plant breeding, management and disease control programs. What limited collaboration among institutions that does exist appears to be mainly based on personal association rather than any particular standard procedure to encourage collaboration. There seems to be little communication and collaboration between research institutions in the north and their southern counterparts. Both regions appear to have programs addressing the central areas of the country.

19. The missions of many of the Ministry of Agriculture and Rural Development Institutes encompass basic research, variety development, seed production and extension for the particular commodity of responsibility. In several instances, research institutes must rely on income generated from the sale of seed, micro-propagated plants or other services in order to fund their basic research activities.

20. Equipment and facility resources vary widely between institutions, but are improving overall. The Institute of Biotechnology and the Institute for Tropical Biology both recently received large grants specifically for work related to transgenic technology. Most of the MARD institutes received equipment funding within the last year. A commonly quoted figure was \$2 million. In most institutes this means PCR machines and gel reading equipment. A few institutes have automated genetic sequencer machines. Several institutes are planning to purchase equipment for micro-array technology within the next year. Training in the use of the new equipment also varies widely between institutions. In some cases it appeared that the PCR machines had never been used in others staff admitted having difficulty using the equipment. There is also substantial foreign investment, especially from European, Japanese and Australian aid agencies in several government institutes and universities.

21. Human capacity remains a concern and a limitation. Most research institutes and universities have a small number of PhD trained scientists and a growing number of MS level faculty. A majority of senior scientists in the north were trained in the former Soviet Union and Eastern Europe. In the south many senior faculty have degrees from U.S. Institutions. A growing number of young scientists in the institutes have been trained in Japan, Australia and Western. In the South, at Can Tho University in particular, several faculty members have received PhD degrees from U.S. land grant schools. Nearly every institution highlighted student and scientist training as a higher priority than more new equipment.

22. Technology transfer is an important mission of the MARD institutes and the universities; however, little attention appears to have been devoted to the education or outreach needs specific to transgenic crop varieties. For example, reports of Bt cotton use report that farmers like the varieties and are likely to want to grow Bt varieties on as many acres as possible with little understanding of the need for resistance management schemes. Identity preservation technology necessary for maintaining GMO and GMO-free commodities is at a very low state of development. Public education programs have yet to be designed, but there is an understanding that these are necessary for acceptance of this technology.

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UNIVERSITY PROGRAMS

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23. In general universities are under the management of the Ministry of Training and Education (MOET) appear to have limited interaction with MARD institutes. However, universities are following the direction of the overall government in the development of programs in biotechnology. Most of the universities have recently developed a new "biotechnology" program

and are beginning to admit students. What exactly the course of study will be and what industries will employ the graduates is not clear at this point. However, there are more students applying for admission to these programs than can be accommodated - a problem of university programs overall.

¶24. The universities in Can Tho and An Giang as well as Cuu Long Rice Research Institute appear to break the mold in terms of collaboration. They have close contact with the University of Agriculture and Forestry in HCMC and exchange research ideas, faculty and students among the institutions. For instance, An Giang University is planning to appoint one of Cuu Long's scientists as the head of its new Department of Biotechnology. The provincial governments also heavily support these institutions. As a result the provincial authorities have a great deal of influence over the research agendas of these institutions and provide substantial direct funding. For Instance, An Giang University is mainly a creation of the An Giang People's Committee and has a very locally focused mission.

¶25. All universities are eager to develop new collaborative efforts with foreign institutions. In general they are looking for opportunities for their students to pursue masters and doctorate programs in the US. They are also looking for U.S. researchers to visit Vietnam as guest lecturers and visiting faculty.

¶26. COMMENT: Post strongly supports continued collaboration between USDA and the Vietnamese research facilities and universities as the biotech and labeling regulations are developed.

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